

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



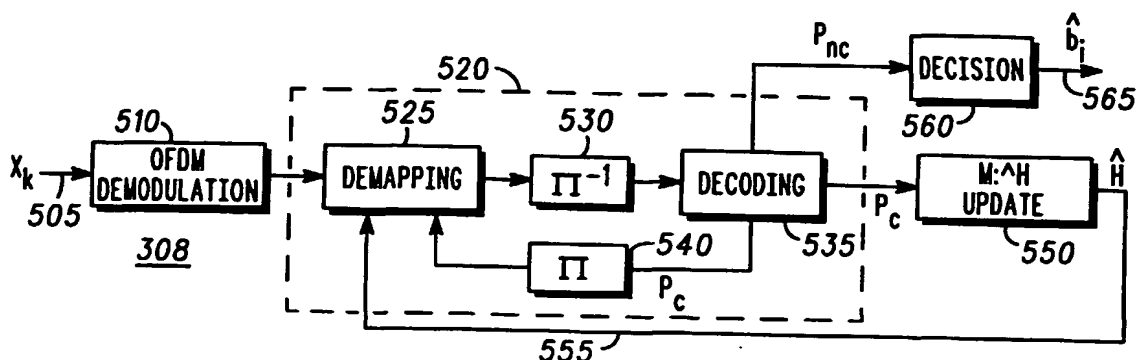
(43) International Publication Date
13 May 2004 (13.05.2004)

PCT

(10) International Publication Number
WO 2004/040834 A2

- (51) International Patent Classification⁷: **H04L 7/00**
- (21) International Application Number:
PCT/EP2003/050774
- (22) International Filing Date: 31 October 2003 (31.10.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
02292728.9 31 October 2002 (31.10.2002) EP
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- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— without international search report and to be republished upon receipt of that report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: COMMUNICATION UNIT AND METHOD OF CHANNEL ESTIMATION IN AN OFDM COMMUNICATION SYSTEM



(57) Abstract: A method (500) of channel estimation in a wireless orthogonal frequency division multiplexed (OFDM) communication system (700). The received data stream (505) is demodulated in OFDM demodulation function (510). The output from the demodulation function is input to a channel estimation function, which incorporates an estimation function (550). The OFDM demodulated signal is input to a de-mapping function (525), which outputs de-mapped signals to a de-interleaving function (530), and thereafter to a soft output decoder function (535). In this manner, the channel estimation function is operational over both the de mapping and decoding functions. The output from the decoding function is fed back to the de-mapping function via an interleaving function 540. The output from the improved estimation function (520) is input to a maximization function (550). The output from the maximization function is input to the de mapping function.